SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Lake Okeechobee Backpumping Potential Water Supply Benefits

March 27, 2001
Governing Board Meeting

COMPREHENSIVE DROUGHT MANAGEMENT INITIATIVE

Lake Okeechobee Backpumping

- Normal backpumping operations authorized during flood control operations
  - Heavy rainfall events
  - Most runoff directed to WCAs
- Water supply backpumping
  - Proposed during this drought to conserve regional water
  - Most runoff directed to Lake Okeechobee

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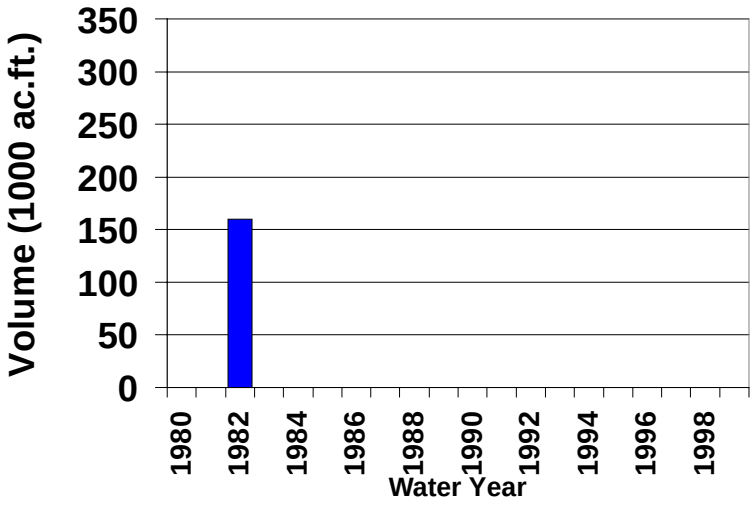
Lake Okeechobee Pump Stations S-2 and S-3

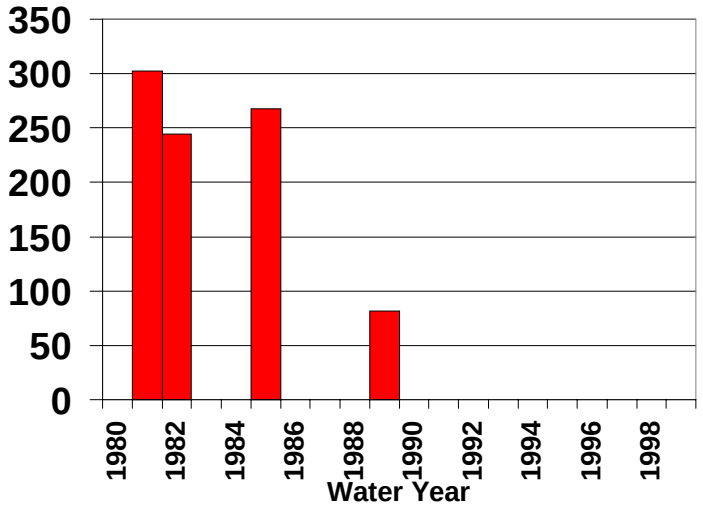
COMPREHENSIVE DROUGHT MANAGEMENT INITIATIVE

Historical Backpumping

- Since 1979, backpumping has been reduced significantly
- Backpumping for water supply purposes has occurred on three occasions: 80-82; 85-86; and 88-89 droughts

Water Supply Backpumping at S-2 & S-3 (1980-1999)





Dry Season

One event: 1981-1982 (160,000 ac.ft.)

Wet Season

Four events: '81,'82,'85,'89

Average: 224, 000 ac.ft.

Range: 82,000 - 302,000

COMPREHENSIVE DROUGHT MANAGEMENT INITIATIVE

Modeling Assumptions

- Lake Okeechobee stage: 10.53 ft. on 03/01/2001
- Simulated 30 historical rainfall scenarios
- Revised Supply-Side Management
- Backpumping is implemented when:
  - LOK level is 0.5 ft. or more below Zone D of the WSE schedule
  - Excess water is available in EAA

Preliminary Estimates of Dry Season (April-May) Backpumping

April-May Rainfall condition in EAA	Average backpumping Volume
Below Normal	2,900 ac.ft.
Normal	7,700 ac.ft.
Above Normal	39,400 ac.ft.

Preliminary estimates of Wet Season (Jun-Oct) backpumping

Wet Season Rainfall condition in EAA	Average wet season backpumping Volume
Below Normal	220,000 ac.ft.
Normal	318,000 ac.ft.
Above Normal	434,000 ac.ft.

Conclusions

- Backpumping during the remainder of the dry season can yield significant volumes under above normal rainfall conditions
- Backpumping during wet season will yield significant volumes under all climatic conditions. The resulting increase in storage can improve the water supply availability during 2002